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<110> Bennett, Robert P.

<120> Methods and Compositions for the Production, Identification and Purification of Fusion Proteins

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<151> 2002-07-08

<150> 60/396,627

<151> 2002-07-19

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<151> 2002-10-10

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 <213> *Klebsiella pneumoniae*

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Gly Thr Val Arg Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala Val
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Gly Asp Thr Leu Met Thr Leu Ala
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<211> 115

<212> PRT

<213> Mus musculus

<400> 7

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Gln Ala Met Lys Glu Met His Phe His Pro Lys Ala Leu Lys Asp Val
35 40 45

Lys Gly Gln Ile Gly Ala Pro Met Pro Gly Lys Val Ile Asp Ile Lys
50 55 60

Val Ala Ala Gly Asp Lys Val Ala Lys Gly Gln Pro Leu Cys Val Leu
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Ile Arg Lys Val His Val Thr Lys Asp Met Thr Leu Glu Gly Asp Asp
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Leu Ile Leu
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<211> 123
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<400> 8

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35 40 45

Ala Gly Lys Ala Gly Glu Gly Glu Ile Pro Ala Pro Leu Ala Gly Thr
50 55 60

Val Ser Lys Ile Leu Val Lys Glu Gly Asp Thr Val Lys Ala Gly Gln
65 70 75 80

Thr Val Leu Val Leu Glu Ala Met Lys Met Glu Thr Glu Ile Asn Ala
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Pro Thr Asp Gly Lys Val Glu Lys Val Leu Val Lys Glu Arg Asp Ala
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Val Gln Gly Gly Gln Gly Leu Ile Lys Ile Gly
115 120

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<211> 122
<212> PRT
<213> *Homo sapiens*

<400> 9

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Val Asp Arg Tyr Arg Ile Thr Ile Gly Asn Lys Thr Cys Val Phe Glu
35 40 45

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Ile Gln Tyr Ile Val Glu Asp Gly Gly His Val Phe Ala Gly Gln Cys

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 <213> *Propionibacterium shermanii*

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<210> 14
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 <212> DNA
 <213> *Homo sapiens*

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His His His His His His
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Ile Leu Glu Ala Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln Ala
35 40 45

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Gly Asp Thr Leu Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr Asp
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<213> Artificial

<220>
<223> pET104-DEST vector

<400> 26

Met Gly Ala Gly Thr Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp
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Lys Val Leu Ala Ser Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu
20 25 30

Leu Ile Leu Glu Ala Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln
35 40 45

Ala Gly Thr Val Arg Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala
50 55 60

Val Gly Asp Thr Leu Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr
65 70 75 80

Asp Asp Asp Asp Lys Gly Ile Ile Thr Ser Leu Tyr Lys Lys Ala Gly
85 90 95

<210> 27
 <211> 449
 <212> DNA
 <213> Artificial

<220>
 <223> pET104/D-TOPO vector

<220>
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 <222> (177) .. (449)

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 gaggatcgag atctcgatcc cgcgaaatta atacgactca ctatagggga attgtgagcg 120
 gataacaatt cccctctaga aataattttg tttaacttta agaaggagat atacat atg 179
 Met
 1
 ggc gcc ggc acc ccg gtg acc gcc ccg ctg gcg ggc act atc tgg aag 227
 Gly Ala Gly Thr Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp Lys
 5 10 15
 gtg ctg gcc agc gaa ggc cag acg gtg gcc gca ggc gag gtg ctg ctg 275
 Val Leu Ala Ser Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu Leu
 20 25 30
 att ctg gaa gcc atg aag atg gaa acc gaa atc cgc gcc gcg cag gcc 323
 Ile Leu Glu Ala Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln Ala
 35 40 45
 ggg acc gtg cgc ggt atc gcg gtg aaa gcc ggc gac gcg gtg gcg gtc 371
 Gly Thr Val Arg Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala Val
 50 55 60 65
 ggc gac acc ctg atg acc ctg gcg ggc tct gga tcc gat ctg tac gac 419
 Gly Asp Thr Leu Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr Asp
 70 75 80
 gat gac gat aag gga att gat ccc ttc acc 449
 Asp Asp Asp Lys Gly Ile Asp Pro Phe Thr
 85 90

<210> 28
 <211> 91
 <212> PRT
 <213> Artificial

<220>
 <223> pET104/D-TOPO vector

<400> 28

Met Gly Ala Gly Thr Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp
 1 5 10 15
 Lys Val Leu Ala Ser Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu

20	25	30
Leu Ile Leu Glu Ala Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln		
35	40	45
Ala Gly Thr Val Arg Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala		
50	55	60
Val Gly Asp Thr Leu Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr		
65	70	75
Asp Asp Asp Asp Lys Gly Ile Asp Pro Phe Thr		
85	90	

<210> 29
 <211> 450
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<220>
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<220>
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 <222> (160)..(447)

<220>
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 <222> (449)..(450)
 <223> n is a, c, g, or t

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ctggctaact agagaacca ctgcttactg gcttatcgaa attaatacga ctactatag	120
ggagacccaa gctggctagc gtttaaactt aagcttacc atg ggc gcc ggc acc	174
Met Gly Ala Gly Thr	
1 5	
ccg gtg acc gcc ccg ctg gcg ggc act atc tgg aag gtg ctg gcc agc	222
Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp Lys Val Leu Ala Ser	
10 15 20	
gaa ggc cag acg gtg gcc gca ggc gag gtg ctg ctg att ctg gaa gcc	270
Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu Leu Ile Leu Glu Ala	
25 30 35	
atg aag atg gaa acc gaa atc cgc gcc gcg cag gcc ggg acc gtg cgc	318
Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln Ala Gly Thr Val Arg	
40 45 50	
ggt atc gcg gtg aaa gcc ggc gac gcg gtg gcg gtc ggc gac acc ctg	366
Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala Val Gly Asp Thr Leu	

55		60		65		
atg acc ctg gcg ggc tct gga tcc gat ctg tac gac gat gac gat aag						414
Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr Asp Asp Asp Asp Lys						
70		75		80		85

gta cat caa aca agt ttg tac aaa aaa gca ggc tnn						450
Val His Gln Thr Ser Leu Tyr Lys Lys Ala Gly						
	90			95		

<210> 30
 <211> 96
 <212> PRT
 <213> Artificial

<220>
 <223> pcDNA/Biotag-DEST vector

<400> 30

Met Gly Ala Gly Thr Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp						
1		5		10		15

Lys Val Leu Ala Ser Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu						
	20		25		30	

Leu Ile Leu Glu Ala Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln						
	35		40		45	

Ala Gly Thr Val Arg Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala						
	50		55		60	

Val Gly Asp Thr Leu Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr						
65		70		75		80

Asp Asp Asp Asp Lys Val His Gln Thr Ser Leu Tyr Lys Lys Ala Gly						
	85		90		95	

<210> 31
 <211> 453
 <212> DNA
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<220>
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<220>
 <221> CDS
 <222> (160) .. (453)

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ggagacccaa gctggctagc gtttaaactt aagcttacc atg ggc gcc ggc acc      174
                               Met Gly Ala Gly Thr
                               1           5

ccg gtg acc gcc ccg ctg gcg ggc act atc tgg aag gtg ctg gcc agc      222
Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp Lys Val Leu Ala Ser
                10                15                20

gaa ggc cag acg gtg gcc gca ggc gag gtg ctg ctg att ctg gaa gcc      270
Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu Leu Ile Leu Glu Ala
                25                30                35

atg aag atg gaa acc gaa atc cgc gcc gcg cag gcc ggg acc gtg cgc      318
Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln Ala Gly Thr Val Arg
                40                45                50

ggt atc gcg gtg aaa gcc ggc gac gcg gtg gcg gtc ggc gac acc ctg      366
Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala Val Gly Asp Thr Leu
                55                60                65

atg acc ctg gcg ggc tct gga tcc gat ctg tac gac gat gac gat aag      414
Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr Asp Asp Asp Lys
                70                75                80                85

gta cct agg atc cag tgt ggt gga att gat ccc ttc acc      453
Val Pro Arg Ile Gln Cys Gly Gly Ile Asp Pro Phe Thr
                90                95

<210> 32
<211> 98
<212> PRT
<213> Artificial

<220>
<223> pcDNA6/Biotag/D-TOPO

<400> 32

Met Gly Ala Gly Thr Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp
1           5           10           15

Lys Val Leu Ala Ser Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu
                20                25                30

Leu Ile Leu Glu Ala Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln
                35                40                45

Ala Gly Thr Val Arg Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala
                50                55                60

Val Gly Asp Thr Leu Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr
65                70                75                80

Asp Asp Asp Asp Lys Val Pro Arg Ile Gln Cys Gly Gly Ile Asp Pro
                85                90                95

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Phe Thr

<210> 33
<211> 744
<212> DNA
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<220>
<223> pMT/Biotag-DEST vector

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<222> (743)..(744)
<223> n is a, c, g, or t

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ctctggttcc gataagagac ccagaactcc ggccccccac cgcccaccgc caccgccata      120

catatgtggt acgcaagtaa gagtgcctgc gcatgccccca tgtgccccac caagagtttt      180

gcatcccata caagtccccca aagtggagaa ccgaaccaat tcttcgcggg cagaacaaaa      240

gcttctgcac acgtctccac tcgaatttgg agccggccgg cgtgtgcaaa agaggtgaat      300

cgaacgaaag acccgtgtgt aaagccgcgt ttccaaaatg tataaaaccg agagcatctg      360

gccaatgtgc atcagttgtg gtcagcagca aaatcaagtg aatcatctca gtgcaactaa      420

agggggggatc tagcgtttaa acttaagctt acc atg ggc gcc ggc acc ccg gtg      474
                        Met Gly Ala Gly Thr Pro Val
                        1                      5

acc gcc ccg ctg gcg ggc act atc tgg aag gtg ctg gcc agc gaa ggc      522
Thr Ala Pro Leu Ala Gly Thr Ile Trp Lys Val Leu Ala Ser Glu Gly
                        10                      15                      20

cag acg gtg gcc gca ggc gag gtg ctg ctg att ctg gaa gcc atg aag      570
Gln Thr Val Ala Ala Gly Glu Val Leu Leu Ile Leu Glu Ala Met Lys
                        25                      30                      35

atg gaa acc gaa atc cgc gcc gcg cag gcc ggg acc gtg cgc ggt atc      618
Met Glu Thr Glu Ile Arg Ala Ala Gln Ala Gly Thr Val Arg Gly Ile
                        40                      45                      50                      55

gcg gtg aaa gcc ggc gac gcg gtg gcg gtc ggc gac acc ctg atg acc      666
Ala Val Lys Ala Gly Asp Ala Val Ala Val Gly Asp Thr Leu Met Thr
                        60                      65                      70

ctg gcg ggc tct gga tcc gat ctg tac gac gat gac gat aag gta cat      714
Leu Ala Gly Ser Gly Ser Asp Leu Tyr Asp Asp Asp Asp Lys Val His
                        75                      80                      85

caa aca agt ttg tac aaa aaa gca ggc tnn      744

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Gln Thr Ser Leu Tyr Lys Lys Ala Gly
90 95

<210> 34
<211> 96
<212> PRT
<213> Artificial

<220>
<223> pMT/Biotag-DEST vector

<400> 34

Met Gly Ala Gly Thr Pro Val Thr Ala Pro Leu Ala Gly Thr Ile Trp
1 5 10 15

Lys Val Leu Ala Ser Glu Gly Gln Thr Val Ala Ala Gly Glu Val Leu
20 25 30

Leu Ile Leu Glu Ala Met Lys Met Glu Thr Glu Ile Arg Ala Ala Gln
35 40 45

Ala Gly Thr Val Arg Gly Ile Ala Val Lys Ala Gly Asp Ala Val Ala
50 55 60

Val Gly Asp Thr Leu Met Thr Leu Ala Gly Ser Gly Ser Asp Leu Tyr
65 70 75 80

Asp Asp Asp Asp Lys Val His Gln Thr Ser Leu Tyr Lys Lys Ala Gly
85 90 95